September–October 1990
Volume 81 No. 5
ISSN 0008–16
$1.50

California GARDEN

HORTICULTURAL CALENDAR

Aug. 18 to Sept. 3 **JULIAN WEED SHOW**
Julian Town Hall, Main and Washington.
Daily 9-5:00 p.m. Free. Call 765-1857.

Sept. 15 **AMERICAN BAMBOO SOCIETY, SOUTHERN CALIFORNIA CHAPTER**
Sale. Ecke Building, Quail Botanical Gardens 230 Quail Gardens Drive, Encinitas
Semi-annual sale of unusual and standard bamboos. 10-3:00 p.m. Free.
Parking $1. Call 534-2853 or 453-0334.

Sept. 15 **OHARA SCHOOL OF IKEBANA, LA JOLLA CHAPTER**
Bargain Bazaar Casa del Prado, Patio B, Balboa Park Sale of plants and containers. 10-4 p.m.

Sept. 15-16 **SAN DIEGO BROMELIAD SOCIETY**
16th Annual Show Casa del Prado, Majorca Room, Balboa Park
Sat: 1-4:30 p.m.; Sun.: 11-4:30 p.m. Free.

Sept. 22 **CHULA VISTA NATURE INTERPRETIVE CENTER**
Marsh Clean-up 1000 Gunpowder Point Drive, Chula Vista
Bring gloves, rakes, wheelbarrows, or shovels. 10:30 a.m. Call 422-2481

Sept 22-23 **HEARTLAND AFRICAN VIOLET SOCIETY** 1st Annual Fall Show
Casa del Prado, Majorca Room, Balboa Park. Sat.-Sun.: 10-4:30 p.m. Free.

Sept. 26 * **SAN DIEGO FLORAL ASSOCIATION** Basket Making Class
Casa del Prado, Balboa park. Martha Rosenberg, instructor. To register, send $15.50 check to San Diego Floral Association, Casa del Prado, Balboa Park, San Diego 92101, Attention: Marie Walsh. 9:30-2:30 p.m. For information-room location, call 232-5762.

Sept. 29-30 **SAN DIEGO BONSAI CLUB, INC.,** Fall Show
Casa del Prado, Majorca Room, Balboa Park. Sat.-Sun.: 10-5:00 p.m. Free.

Oct. 3 * **SAN DIEGO FLORAL ASSOCIATION** Basket Making Class
Details same as for Sept. 26 class.

Oct. 6-7 **BALBOA PARK AFRICAN VIOLET SOCIETY** Fall Show
Casa del Prado, Majorca Room, Balboa Park. Sat.-Sun.: 10-4:00 p.m. Free.

Oct. 10, 17, & 24 * **SAN DIEGO FLORAL ASSOCIATION** Flower Arranging Classes
Velma West, instructor. $25 for series of 3 classes.
To register, send check to San Diego Floral Association, Casa del Prado, Balboa Park, San Diego 92101, Attention : Marie Walsh.
9:30-2:30 p.m. For information-room location, call 232-5762.

Oct. 13 **GROSSMONT GARDEN CLUB** Plant Sale
In front of Von's 8011 University Avenue, La Mesa 10-4:00 p.m. Call 463-1273

Oct. 13 **NORTH COUNTY ROSE SOCIETY** 24th Annual Rose Show
Plaza Camino Real, Carlsbad 1-6:00 p.m. Free.

Oct. 13 **OHARA SCHOOL OF IKEBANA, LA JOLLA CHAPTER,** Bus Trip
Pickup at University Town Center, Getty Museum in Malibu-Rodeo Drive Shopping Center in Beverly Hills. $20 members; $25 non-members. Call 456-0599 or 672-0128.

Oct. 13-14 **DESCANSO GARDENS GUILD Annual Sale**
1418 Descanso Drive, La Canada Flintridge. More than 1,000 unusual plants, including Chinese grape-Angel's Trumpet. Also bonsai material. Sat.-Sun.: 9-4:30 p.m. Garden admission $3.
Call 818/790-5571.

Oct. 16 * **SAN DIEGO FLORAL ASSOCIATION** Quarterly meeting-Dinner
Casa del Prado, Majorca Room, Balboa Park 6:00 p.m. social time-dinner; 7:15 p.m. meeting-program. Information-reservations: 232-5762

(Continued on Page 154)

California SINCE 1909
GARDEN
LIBRARY OF CONGRESS NO. ISSN 0008-1116

San Diego Floral Association & Garden Center
Casa del Prado, Balboa Park
San Diego, CA 92101-1619
Monday through Friday
10 a.m. to 12 and 1 to 3 p.m.
(619) 232-5762

VOLUME 81 NUMBER 5
SEPTEMBER-OCTOBER 1990

130 Horticultural Calendar . . . . . Mary Jordan
132 A Walk in the Desert Garden . . . . . Lucy Warren
135 Xeriscape . . . . . Jan Tubiolo
139 Fall Folliage Can Be Beautiful . . . . . Staff
139 Violets . . . . . Robert Horwitz
141 Want To Learn About Plants . . . . Keppy Arnoldsen
142 UC Experts Outline Research Agenda
144 Environmental Horticulture . . . . . Forrest Cress
145 Deadheading a Way of Life . . . . . Melba Davis
145 Historical Camellia at the Huntington Gardens
146 Florascope
146 Free Directory
147 Book Reviews . . . . . Elsie Topham
150 Now Is The Time . . . . . Penny Bunker
152 Mahoniah . . . . . Alfred C. Hottes
153 Barbara's Basic Botany #3 . . . . . Barbara S. Jones
155 Affiliates . . . . . Nancy Cottingham

Cover photo of Balboa Park Desert Garden by LUCY WARREN

Published by
San Diego Floral Association
for 80 Years

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619/295-0342
PRINTED BY:
Neyenesch Printers, Inc.
2750 Kettner Boulevard
San Diego CA 92119

Manuscripts are invited. Deadline is 90-days prior to publication date. All manuscripts and illustrations submitted will be handled carefully but we cannot assume responsibility for their safety. All submissions must be double spaced and accompanied by returned postage, if you expect them to be returned to you. *Hortus Third* is the authority for all botanical names used in this magazine. All opinions expressed are those of the authors and do not do not necessarily reflect the views of the editors of the *California Garden*.

Address all editorial material to:
California Garden
San Diego Floral Association
Casa del Prado Rm 105,
Balboa Park
San Diego CA 92101-1619

Postmaster, Send change of address to:
California Garden,
Casa del Prado Room 105
Balboa Park, San Diego CA
92101-1619

Single copies of the current issue of CALIFORNIA GARDEN magazine can be purchased for $1.50 at the locations listed.
CALIFORNIA ARBORETUM FOUNDATION, Inc., 447-8207, 301 North Baldwin Ave., Arcadia, CA 91006.
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CALIFORNIA GARDEN (ISSN 0008-116), a non-profit publication, is published bi-monthly for $7.00 per year or $13.00 for two years, by San Diego Floral Association, Inc. Single copy is $1.50. For foreign delivery add $3.00. Entered as second class matter, December 8, 1910 at the San Diego Post Office under the Act of March 3, 1879. Second Class Postage paid at San Diego.

A WALK IN THE DESERT GARDEN

by Lucy Warren

THE DESERT GARDEN in Balboa Park is a tribute to the long standing interest San Diegans have had in drought resistant plants. The current Desert Garden has had several predecessors. The 1915 Panama-California Exposition was called the "Garden Fair" and included the Arizona Cactus Garden, the first park garden devoted to desert vegetation. It was located "north of Cabrillo Bridge on the second point on the east side of the canyon." The area is now included within the San Diego Zoo. Exposition gardeners also planted the edges of the canyons with native vegetation, including fan palms, prickly pear cactus, and agaves. Matilija poppies were transported from Riverside, nearly depleting their natural habitat.

Miss Kate Sessions sought for many years to have the city develop a specialized Aloe and Agave Garden, finally realized in 1931. Many prominent and proud local gardeners contributed fine and rare specimens to this display, (a great source of pride for the city). On the occasion of the garden's dedication to her at the 1935 California-Pacific International Exposition, on September 23, Miss Sessions was first officially recognized as the "Mother of Balboa Park." This garden was located in the area behind the current Balboa Park Club and Palisades Building. Some traces of the original plantings still remain. Specimens from this garden are evident in the Desert Garden.

Just prior to the 1935 Exposition a separate Cactus Garden was developed on the east side of Balboa Park, closer to the site of the present Desert Garden. The Cactus and Succulent Society was very involved in this garden from its inception, as it has been in the current Desert Garden, established in 1975.

With over 1,200 plants occupying over two and one-half acres, the Desert Garden has a completely different beauty from most of the lush green garden areas in Balboa Park. Taking the pedestrian footbridge from the Prado eastward across Park Avenue, one enters a different world which needs different horticultural attention.

Overall view of Balboa Park Desert Garden
Photo by: Dave Reiter

Park staff, Jenny Badua, who cared for the garden until her recent transfer to Mission Bay Park, and Lit Phan, who is currently in charge of maintaining the Desert Garden, took me through their domain. In our fourth year of drought, the Park is on a strict watering schedule of Monday, Wednesday and Friday before 9:00 a.m.. The Desert Garden is lightly watered twice a week during the summer months, and only once every two weeks in the winter. The cactus areas are the exception to this schedule, needing water only once a week during the summer and once a month or less in the winter.

One difficulty in maintaining the Desert Garden is that the heavy, compact native soil is not porous and gritty for easy natural drainage, as would be preferred by these plants. Good drainage is important for desert adapted plants, strongly subject to root rot with too much standing moisture. In its favor, the content of natural organic material in the soil is minimal. The only nutrients added in the garden are bone meal for the cactus, cottonseed meal for the agaves, and decomposed granite to control weeds. The plants receive full sun exposure to partial shade.

While Ms. Badua was in charge of the garden she tried to generally group desert plants from the old world on the west side of the walkway and those from the new world on the east side, but there are exceptions to this concept, particularly in long established plantings. Many specimens from the same botanical family are in the same area, providing interesting comparisons. It is fascinating to note parallel but variant adaptations from different continents with similar climates.

Most of the plants in the garden are succulents, that is, thick fleshy plants with abundant sap, primarily native to seasonally arid or semiarid regions. Succulence enables the plants to store water. Adaptations to difficult climatic conditions lead succulents to a wide variety of unusual conformations. Indeed, many are prized for their oddity. One example

near the south end of the garden is the *kalanchoe beharensis*, commonly called the feltbush or velvetleaf. Its thick cupped gray leaves are covered with a soft fuzz. This odd shape and texture are adapted to hold any light rain or dew which fall on the plant. Grooves in the leaves channel this water to the stem and finally down to the roots. The thick leaves plump up to store the water for use by the plant. Drought resistance does not obviate the plants' need for water, particularly at critical growth and reproduction periods, but indicates adaptations to shortages of water in natural environments.

Kalanchoe beharensis **Photo by: Lucy Warren**

Walking through the garden northward from the Rose Garden, the eucalyptus trees from Australia seem natural to the area, and are well adapted to semiarid conditions. Some of the desert plants look like strange roses even when they are not in bloom. It is a special treat to come when the roses are dormant, December to March, to see the long blooming aloes in flower.

At the east end of the footbridge across Park Avenue the garden is dominated by old world aloes, native primarily to Africa. There are over 250 aloe subspecies in all. The Desert Garden includes many representatives, the most familiar being the medicinal aloe vera (*Aloe barbadensis*). For comparison, at the north end of the garden, near Zoo Place, are about 30 different varieties of agaves (out of about 300) which are native to North and Central America. Visually aloes and agaves are somewhat similar but there are several notable differences. Aloe bloomstalks emerge from between the layered leaves and one plant may bloom several times. The leaves may form rough serrated edges but the end of the leaf is not actually pointed. Agaves can take many years to bloom, but each plant only blooms once from its center and then it dies. Fortunately, each mother plant fosters many pups around the base which replace the original plant. Agaves often live in areas of high winds, which help propagate new colonies by scattering the seeds borne on tall bloomstalks. Leaves of agaves are often toothed and are sometimes thread bearing. Unlike aloes, the end of each agave leaf is sharp and pointed.

Throughout the Desert Garden are examples of euphorbias, a very large family encompassing over 1,600 subspecies worldwide. Euphorbias are as diverse in conformation as poinsettias and spurge. They may resemble bushes, trees, flowers or cacti. They all have the common characteristic of a milky sap or latex, which flows freely when the plant is cut or broken. This milky juice may produce a severe dermatitis reaction, much like poison ivy. The juice of some species is used by natives to poison arrows. While drinking the clear cactus juice has saved lives on the desert, the milky white euphorbia juice should be avoided whenever possible. Some examples of euphorbias in the Desert Garden include the South African pencil bush (*Tirucalli*), milk tree (*trigona*), crown of thorns (*Milii*) and many cactus-like euphorbias including the polyacantha, and grandicornis.

The point jutting out eastward to Florida Canyon includes familiar natives of the Southwest and Mexico with a few cacti from Peru. Following a short artificial wash near the sidewalk are plants native to the nearby Anza-Borrego desert. Farther out the point are Southwestern Saguaro (*Carnegia gigantea*), the spidery Ocotillo (*Fouquieria splendens*), the fleshy barrel cactus (*Echinocactus ingens*), the aggravating cholla jumping cactus (*Opuntia prolifera*) and the savory prickly pear (*Opuntia elata*). Cactus thorns are distinguished from cactus-like euphorbia thorns by multiple thorns emitting from a single pore-like point or areole. The aeroles of some cacti can be found on the face of the leaf, not just at the edges. The cactus family includes as many as 2,000 subspecies in three basic tribes, but botanists are still sorting out generic and species limits.

On the point also is the bizarre *Idria columnaris Kellogg* or Boojum tree, native to Baja. This plant is so strange looking with its long cone-like shape and short bare branches, that it only seems natural there is no more than one of its species. It has been put into the Foquieriaceae family with the Ocotillo. Looking down the hill, the lacy Mexican Palo Verde (*Parkinsonia aculeata*), adds a gentle touch to an austere landscape, especially when it is full of soft yellow blossoms.

Spring and early summer grace the west side of the trail with the brilliant orange and magenta blossoms of mesembryanthemums, a very satisfactory drought tolerant ground cover. Only one of the 74 subspecies is

native to the Americas; most are native to the Mediterranean area and South Africa. Commonly known as ice plant, larger forms of this group are often planted along local freeways.

On the west side of the sidewalk you will see two interesting mounds planted solely in cacti, all gifts from the Cactus and Succulent Society. The Bojum trees and many other specimens have been gifts from the Society and its members over the years.

Interesting and unusual trees add further depth to the garden landscape. The African or Madagascar Dombeya will grow only in a few locations in the U.S. The *Dombeya rotundifolia* or *spectabilis* is called the snowball tree for its white flowers, appearing before the spring leaves. Two different species of Tabebuia or trumpet tree of tropical America have lavender and yellow blossoms. The *Brachychiton rupestris* of Queensland, Australia is called a bottle tree or elephant foot tree because of its swollen trunk. On closer examination its bushy head has delicately fingered leaves. *Dracaena draco* in the Agavaceae family is a source of "dragon's blood" used in the varnish industry and in photoengraving. A wound to the trunk of this prehistoric looking plant will yield a red, blood-like sap.

Farther along the trail a dry stream bed is lined with Mexican Guadalupe Island Blue Fan Palms (*Brahea edulis*) leading to examples of other palms. It is one of the most drought tolerant palms. Nature often endows plants wearing blue-gray foliage with low water requirements. The stream bed is a typical environment for the Mexican palms, which take advantage of moisture from flash floods in their native areas. The Baja native *Washingtonia robusta* is found further "upstream." Notice the shrub by the edge of the streambed: the cordia boisseri blossoms look almost like white wild roses and flower all summer long. When this plant is drought stressed, the leaves fold together to conserve water.

Beyond the palms are more North American natives, such as giant yuccas, in the Agavacae family. Familiar names of some are Spanish-bayonet or Spanish-dagger for the spiked leaf tips. The jojoba (*Simmondsia chinensis*) is favored for the oil in its seeds and is a pleasant drought tolerant bush. Jojoba oil is used in cosmetics and was once used as a replacement for the oil of the sperm whale.

The Desert Garden is too large for the current staff to maintain completely. Its eastern canyon side is allowed to "go native" with plants and brush not actively cultivated, while Mr. Phan spends hours each day controlling weeds in the displayed areas. In large open areas weeds can be controlled chemically, but near the plants all weeds are pulled by hand. As we walked along, rabbits and ground squirrels enjoyed the habitat without damaging the self protected plants, but the mark of human pests was very evident. Carvings on stems and leaves open them to disease and insects. In places entire plants have been taken. Youths have even used sticks to break large sections off these slow growing survivors.

Perhaps education will help people to better appreciate these wonderful adaptations of nature. Jenny would love to see a group or organization take on the project of developing a self guided walking tour, labeling the plants in the garden and having a map with illustrations and information about the plants. The City Schools have a Balboa Park Program to help teachers familiarize their students with the park. Offshoot Tours offers a one-hour guided tour of the Desert Garden on the fourth Saturday of each month (see Horticultural calendar).

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LUCY WARREN is a market research professional who also enjoys horticultural research.

XERISCAPE IS . . . .

by Jan Tubiolo

BY NOW, A LOT HAS BEEN WRITTEN about "Xeriscape," particularly since our continuing 4-year stage. It may even become a permanent part of our Southern California lifestyle, whether or not the rains come regularly, since we live in a semi-arid environment with an annual rainfall averaging fewer than ten inches. Our own local water supply from rivers or runoff will support barely 50,000 persons. Check our current population and it's easy to see why water conservation must become a natural part of our life.

The concept of xeriscape has spread across the United States from the east coast to one of our newest National Xeriscape member chapters in Hawaii, and beyond that to two foreign countries. Xeriscaping has caught on and is rapidly growing around the world in areas of water shortages. It has received impetus because of the world-wide concern for the amount and quality of resources in our environment.

More and more people are aware that Xeriscape means "Water conservation through creative landscaping" and that the word derives from the Greek *"xeros"* for "dry" and *"scape"* for "vista." The word was coined over eight years ago in Denver when that city faced and tackled its own water problems. Unfortunately, the principle occasionally gets mired in misconceptions and has met some resistance in practice because of the mistaken idea that Xeriscape literally means, 'Cactus and Succulents and gravel - NO turf - NO water!' (A Xeriscape may use any or all of these elements along with a truly broad range of plant materials from around the globe. And contrary to some beliefs, no Xeriscape could survive without some water - we're not talking painted concrete here.)

The purpose of Xeriscape is to promote appropriate landscaping methods that eliminate outdoor water waste yet maintain attractive landscapes, using seven steps or guidelines to achieve its goals. The key to making use of those precious water resources is good water management.

When you think about the seven Steps of Xeriscape, they are just common sense applied to the landscape. What you can achieve when going from a traditional thirsty landscape which needs lots of water and lots of care to one that applies efficient landscape techniques is a landscape that gives you plenty of variety, color, shade, and another precious, vanishing commodity, free time.

The following seven Steps will help you to create the landscape/garden you want while reducing water use.

1. PLANNING AND DESIGN

Whether you use the services of a professional or go on your own, you need a well-thought-out plan. This is the most important step for a successful Xeriscape because it is the scaffold you build to support all the other steps. The design can simply be a sketch showing structures and planting areas with existing trees, shrubs, grass areas, etc. Many homeowners start out with a "Zeroscape;" some want to replace what they already have. The design will allow you to implement your plan in phases and minimize initial cost if budget is a primary consideration. The next most important element of the design is function. Several things to consider include: lifestyle, appearance, view (keep or hide), children or pets, maintenance and water requirements. Once you have the plan, you are ready to get your Xeriscape off the paper and into the ground.

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2. LIMITED TURF AREA

Xeriscape stresses appropriateness in the landscape so use turf where it makes sense and provides a functional use. If you need a spot for lawn games or a play area for kids, you need some grass. Remember, lawns usually require the most water in a landscape to remain healthy. Locate turf where it can be irrigated separately from lower water-demand plants if possible. Where practical, substitute a less water demanding ground cover or mulch or hardscape (deck, pathway, patio, etc.). Water thoroughly, but only when needed to encourage a deep-rooted lawn. Look for signs of stress in the lawn as a signal when to water, such as a dull grayish appearance or grass that won't spring back (footprints remain visible for some time).

3. EFFICIENT IRRIGATION

The first step to achieve the greatest water savings, is to separate your landscape into high, moderate and low use zones so you can irrigate accordingly. Take micro-climates into consideration since this will affect how rapidly water may evaporate. Deep-water plants to encourage them to grow deep root systems so they can use all available water and thus go longer between waterings. Use low gallonage sprinkler heads on lawn areas and a drip system on trees, shrubs and container plants. Watering in the early morning or late evening makes good sense since there is less wind and lower temperatures. An automatic timer will be the most efficient way to deliver the water to the plant materials when needed. Prepare and follow a schedule, but don't forget to change the program with the seasons or during unseasonable weather (e.g., dry Santa Ana winds).

4. SOIL IMPROVEMENTS

Properly prepared soil has more to do with a successful Xeriscape than almost any other step. If possible, have your soil tested so you know what kind it is and what it may need. Amending the soil will allow greater retention of water by the plant and will provide nutrients. Healthy plants can stand much greater stress during drought periods.

5. MULCHES

Mulches serve many purposes. Basically, they conserve moisture by covering and cooling the soil, minimizing evaporation. They also slow erosion and will nearly eliminate weed growth if applied to depths of 3 to 4 inches. Mulches can be organic or inorganic and can

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CORRECTION

In the July-August issue of California Garden magazine, the picture caption on page 104 should read: "Author pointing to "Grande staghorn fern" along north wall.

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Amount	Price
1	$1.50
10	$13.50
25	$31.25

These reservoirs (Do Not) include wicks.

Colors for all reservoirs are: Lavender, Watermelon, Crystal, Light and Dark Blue, Light and Dark Green, Gold, Yellow and Red. These are transparent colors so water level is visible. *Please indicate size hole you wish.*

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play a decorative role in place of plant material, reducing water needs. Bark chips and wood shavings are typical organic mulches, while gravel, cobbles and volcanic rock are examples of inorganic mulches. When using non-organic mulches, try using neutral colors of rock as lighter colors may raise the heat level around the home and dark will absorb too much heat and dry the soil faster.

6. LOW WATER USE PLANTS

You can find nearly every type, color and variety of low water use plant for your particular landscape. Your local nurseryman can offer the most help with your choices. These include native California plants, traditional plants from other sunbelt areas and "exotics" from the Mediterranean belt around the world. All are used to dry summers and short, rainy winters and can thrive on reduced water programs once established. Keep in mind that low-water does not mean NO water. Using the other steps of Xeriscape will even help adapt plants to less water that you may not have considered xeriphytic because they have always survived being overwatered. You can actually have more plants with less water.

7. APPROPRIATE MAINTENANCE

The importance of this step cannot be overestimated. This is where a Xeriscape will either thrive or succumb, once installed. Too often, a homeowner thinks Xeriscape actually does mean "zeroscape" and requires no maintenance at all. All cultivated plants require pruning, fertilization and weeding, and most of all, regular watering until the plant is established. A maintenance schedule is essential, particularly if you have a drip irrigation system because you need to check the system regularly to see if it is working since the amount of water being applied is so low that the plants themselves may be the only indicator that all is not well.

There are many fine books and brochures available on the individual aspects of Xeriscape principles and guidelines, whether your interest is in specific plant materials, soil amendments or any other step needed. Do not hesitate to consult with a plant or irrigation or design expert if you have questions. Their livelihood depends on water conservation too.

The 4th Annual San Diego Xeriscape Conference will be held in San Diego, in the new Convention Center, on Thursday and Friday, Oct. 25 & 26. The two-day conference is sponsored jointly by the Cuyamaca College Botanical Society and the San Diego County Water Authority. Xeriscape issues are addressed in concurrent sessions conducted by industry professionals in many horticultural fields. The Conference will include workshops, a walking tour and panel discussions. The emphasis is on education of the professionals in their various fields, and through them the public, and the student of horticulture.

For information, call: 443-1756.

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JAN TUBIOLO has been the Coordinator for the San Diego Xeriscape Council and Conference for the last three years. She is a graduate of Cuyamaca College. Jan resides in Lakeside and currently is employed as Open Space Inspector for the City of Chula Vista.

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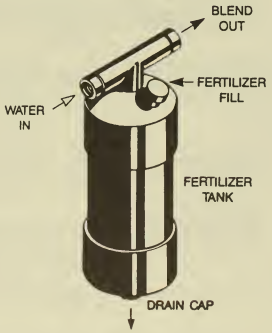

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FALL FOLIAGE CAN BE BEAUTIFUL

by Melba Davis

TOO OFTEN, CALIFORNIANS can only accept trees and plants that stay green all year long. Some people from other states would say Californians are a tad lazy and don't want to rake leaves, but they also point out that we miss beautiful fall foliage.

We look at all of the advertisements suggesting the beauty of fall color in the New England states and in the states of our northwestern neighbors, yet we too can have a good selection of color in our own yards and neighborhoods. Three of the more popular trees with exciting color are the Chinese Pistache with crimson, scarlet, orange and even yellow hues of leaves; Liquidambar trees with leaf varieties ranging from the deep reds through yellow - peach, pink, orange and a purple red for the burgundy variety; and the Maaidenhair tree, which turns its fan-shape leaves into a luminous yellow.

Californians can also choose from maples, redbuds, dogwoods, honey locust, pears, poplars and some of the oaks that bring fall into perspective. Colorful shrubs in fall include some of the viburniums, nandina, cotoneaster, crytomeria elegans, willows and many more. A few other plants turn color also; consider the wonderful wisteria and grape vines to bring out the change in the seasons.

They say that seeing the changes in the landscape help one handle the weather changes that might otherwise surprise you one day. Trees that have provided shade throughout the summer months can now shed their leaves to allow all of the available heat from the winter sun touch your home. This will cut down on the heating bills and the use of our energy resources. Look around and watch for colorful plants that change this fall or visit your local garden center for professional help in picking the right trees and plants for your fall color beauties.

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MELBA DAVIS is a garden news writer with the California Association of Nurserymen.

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VIOLETS

by Robert D. Horwitz

THE VIOLET SHOWING its shy color in early spring is just as much a harbinger of spring as the tulip. The violet belongs to the viola family which includes pansies. The one used most here is the odorata, aptly named from the soft universally known scent. Once they start blooming in the late winter, the blooms will ofttimes last throughout the summer, shyly peeping around dark green smooth edged leaves. The plant grows from one main stem from which leaves appear first, then the flowers. Violets are easy to grow and only require enough shade, moisture and rich well-draining soil. They respond to almost any kind of balanced fertilizer which may be applied sparingly during the growth spurt and monthly thereafter until dormancy sets in.

Violets are self sowing and can propagate themselves not only by seeds which ripen on the plant and disperse into the surrounding soil, but by runners from the base of the stem. When they are grown in pots, it is best to discourage the runners to allow the main plant to bush out and put its energy into flower production. They can grow as tall as a foot under ideal conditions. Along the California coast violets can tolerate sunshine but will turn brown if the sun is too strong for too long.

If you allow runners to root in the soil around the parent plant, you can dig up the rooted portions and re-pot them for new plants. You can also save the seed pods. After they dry and lie dormant for a few months, they can be sown as well. Use a rich loamy soil with plenty of humus in it and perhaps some sand to aid in good drainage.

There is another member of the violet family called the parma violet which produces double blossoms and has a sweet scent similar to the odorata. Culture for both is the same. The parma is used more often in open bed plantings, and here you can take advantage of the spreading of the plants by runners. The violet is one case, at least, where shyness is a virtue.

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ROBERT D. HORWITZ is a retired Aerospace engineer and is an avid gardener.

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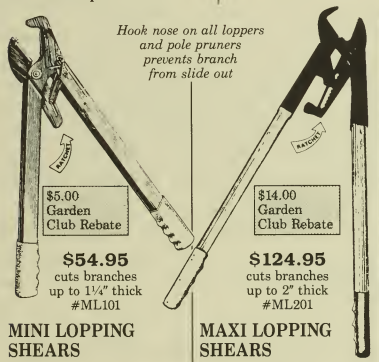

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WANT TO LEARN MORE ABOUT PLANTS

by Keppy Arnoldsen

THE "WORLD OF PLANTS" IS such a huge entity, containing a wealth of information so vast that none of us could ever master it completely. Yet every true gardener, every plant lover, strives to increase their knowledge and broaden their expertise all the time. There are always new things to learn, seeds to sow, plants to grow. Thw well of knowledge AND INFORMATION IS AN ENDLESS ONE.

Yet how many of us go through life without really grabbing hold of opportunities that are available, or absorbing knowledge that is offered us? It was that way for me until just over a year ago when I decided to broaden range of skills and knowledge in horticulture with an education. I enrolled in a community college in a major called "Ornamental Horticulture" which I had hoped would teach me new things about plants and gardening. Up to then, I had acquired my "green thumb" through inheritance and self-teaching and had not considered a formal education. It is that way for many avid gardeners, evidenced by the fact that the elderly are usually better gardeners than youthful ones. It takes many years of practice and learning to be skilled in the care and culture of the wide range of plants that exist. On the other hand, education provides a short-cut to spending a lifetime learning about plants.

Many people think that "college courses are not your cup of tea" or that "you do not have time for taking classes?" A costly oversight considering what there is to be had. For those of you who are already involved with horticulture, the oversight can be a costly one. Many students have advanced through furthering their education, and doors have opened which once stood closed for lack of knowledge. If you are wondering if horticulture classes might be worth a try, or if you can answer "yes" to any of the following questions, you should think about it.

* Would you like to learn more about plants and how they function?
* Would you like to know how to design a water-saving drip irrigation system?
* Ever wonder what type of soil you have and what problems can be associated with its properties?
* Have you always wanted to learn how to design floral arrangements?
* Ever wish you knew the name of a particular flower, tree or shrub?
* Ever wonder what "Xeriscape" and drought-tolerant plants were all about?
* Would you like to learn how to propagate that "hard-to-start" plant of yours?
* Ever wish you knew how to design your own "stunning" landscape?
* Ever have the need to know what pest was munching on your garden and how to get rid of it, safely?
* Ever need to know what was wrong with a favorite houseplant?

At the June 19th Annual Meeting of the San Diego Floral Association, Cathy May, of Spring Valley, Ca., was the recipient of the 1991 Roland and Ethel Hoyt Scholarship Award of $500.00.

Mrs. May plans to attend U.C. Pomona to complete her B.S. Degree in Ornamental Horticulture. Presently she is an outstanding student at Cuyamaca College and president of the Cuyamaca Botanical Society.

Floral wishes her well in the pursuit of her educational goals and in her future career in Ornamental Horticulture

The answers to these questions and much more can be found at Cuyamaca College in El Cajon, where Brad Monroe started the Ornamental Horticulture Department over ten years ago. Today the program offers a "down-to-earth" hands-on method with a 13-acre field site that includes a greenhouse, retail nursery, floral field and sod field with plans for another greenhouse in the near future. Courses are taught by two full-time faculty members. Brad Monroe and Michael Hall, as well as outstanding members of the industry. Some of the opportunities available include courses in floral design, irrigation, landscape design, xeriscape, golf and sports

UC EXPERTS OUTLINE RESEARCH AGENDA FOR PESTICIDE ALTERNATIVES

A TEAM OF UNIVERSITY OF CALIFORNIA agricultural pest experts has outlined a broad research and extension agenda that they believe will have to be addressed if agriculture is going to replace existing synthetic pesticides.

Part of the July-August issue of California Agriculture, the University's journal of research in progress, the outline is one of four special reports from a task force appointed last October by Kenneth R. Farrell, UC vice president, agricultural and natural resources.

"The 1990's are destined to bring about substantial changes in the availability and use of pesticides in the California food and agricultural industries," Farrell states. Recognizing that some pesticides will become unavailable, Farrell asked the experts to review the impact of chemical losses on pest management practices.

The information will help the University respond to the challenge.

Mary Louise Flint, Cooperative Extension entomologist, authored the research agenda. According to Flint: "Substantial expertise in many of these areas already exists at the University of California and elsewhere, and much research is in progress."

"These efforts will have to accelerate in order to bring techniques rapidly to the field and broaden their application," Flint emphasizes. She identifies 24 areas in which research and extension efforts should be increased to meet the growing governmental and societal pressure to reduce the use of synthetic pesticides.

They include biological options such as microbial and autocidal controls, cultural options such as crop rotation and physical controls, and chemical options such as semiochemicals and improved pesticide application technology. Education of the public and of farmers also is an essential element of the program.

Farrell warns that "Public support of UC's research and extension budget has eroded substantially in the past decade as a result of inflation and the additional cost of keeping research and extension programs on the 'cutting edge' of science. If we as a society hope to resolve such socially and economically important issues as are embodied in our current efforts to reduce pesticide use, we have no alternative but to increase public investment in the research and education that will lead to those solutions."

In another report Frank G. Zalom, Director of the Statewide IPM Project, and Joyce F. Strand, IPM systems manager, give results of a survey on pesticide alternatives. Data on more than 600 crop and pest situations was collected form 70 UC and U.S. Department of Agriculture scientists.

Continued from page 141 . . .

turf management, soils, pests and pesticides, interior-scaping, annuals and perennials, trees and shrubs, plant propagation,,,, greenhouse plant production, landscape construction and more. Not only are the selections diverse, but the hours are convenient, and the price is nominal. Cuyamaca College is also known as the "Weekend College" due to its large volume of courses that are offered on weekends and week nights. This is real plus for full-time workers who want to broaden their skills.

There is a wide range of student ages and backgrounds at Cuyamaca College, with an average age at 32. Some are career change individuals, while others are those who wish to enrich their lives by a greater understanding of the world of plants. Many are those working in the horticulture field with promotional goals or specialty changes in mind. No matter what the reason,, one thing is certain: you will learn new things about plants, becoming aa better horticulturist and person because of it.

Whether you choose Cuyamaca College or another school to broaden your knowledge, at least consider the choice! Don't let opportunities slip past you. Each day that grow in the "world of plant," I'm a happier person. It might be the same for you.

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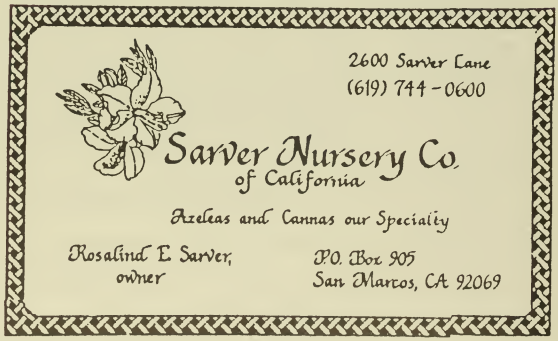
KEPPY ARNOLDSEN is a student at Cuyamaca College and is the editor of their publication The Urban Horticulturist.



"At least one biological or chemical alternative was noted for 75 percent of the specific crop-pest combinations," according to Zalom and Strand. Of those 60 percent are chemicals, including many synthetic pesticides.

Zalom and Strand caution that "the true practical and economic availability of many (alternatives) is uncertain." A large number of potential alternatives for farmers may not work as well or will require further development. As examples of pesticide options they cite long term crop rotation, hoeing of weeds and solarization of fields with plastic mulch, but observe that they have limited applicability.

In another report UC experts list chemicals which could be impacted by recent or pending laws. They reviewed the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), the Federal Insecticide, Fungicide and Rodenticide Act as amended in 1988 (FIFRA 1988), and the California Environmental Protection Act of 1990 (EPA 1990), an initiative on the November ballot.

Proposition 65 affects 20 ingredients, FIFRA 1988 impacts 80 ingredients and EPA 1990 potentially could remove from use as many as 40 pesticide ingredients. Many of the chemicals appear on several lists.

Under FIFRA 1988, manufacturers must provide new registration data or the chemicals will lose their registration by 1997. A variety of reasons, including cost of reregistration and the small potential market in many of California's crops, are likely to result in many ingredients not being reregistered. Nationwide 1,000 minor crop insecticides uses could be eliminated through FIFRA 1988.

Under the EPA 1990 initiative 20 ingredients on the U.S. Environmental Protection Agency's list of probable carcinogens would be banned from use in California by Jan. 1, 1996. A three-year extension could be granted if there is no alternative.

A second list of 20 possible carcinogens would be canceled in 10 to 13 years if they were not shown to be non-carcinogenic.

Proposition 65 has not resulted in any cancellations. But EPA 1990 would incorporate its list of 20 carcinogenic or reproductively toxic ingredients.

The effort by UC's Division of Agriculture and Natural Resources to identify viable alternatives and refine the research agenda will continue with further updating of the alternative's database.

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Copies of the full report may be obtained by calling the Office of External Relations for UC's Division of Agriculture and natural resources, 415-987-0106.

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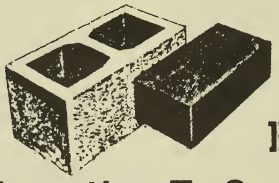

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ENVIRONMENTAL HORTICULTURE PUMPS BILLIONS INTO STATE'S ECONOMY

by Forrest Cress

THERE IS MUCH MORE THAN MEETS the eye to California's irrigated landscapes. They are products of a huge industry - environmental horticulture - that pumps billions of dollars annually directly into the state's economy.

Statewide, the industry has an annual sales and services value of more than $6.5 billion, perhaps as much as $10 billion, and it employs some 100,000 Californians.

These findings are based on a study done last year, and "the study has turned out to be a very timely one in light of the water shortage facing the state and the horticulture industry. Water is the industry's number one concern," notes the project coordinators Victor A. Gibeault, Dennis R. Pittenger and Stephen T. Cockerham of UC Riverside.

Contrary to what many people think, shutting off all the water to California's irrigated landscapes - home lawns, golf courses, parks, freeway plantings, school grounds, athletic fields, whatever - would not significantly ease the statewide water shortage. No more than 4% of this state's total water use goes to irrigating landscapes, according to calculations made from state and water district actual use figures and projections.

Policy decisions that lead to a reduction in water available to irrigate landscapes could have a significant impact on this industry and ultimately lead to employment cutbacks, according to the project coordinators. By definition, they explain, California's environmental horticulture industry encompasses all firms and people involved in plant production, their wholesale and retail sales, landscape design and maintenance, and businesses that provide them with their equipment and materials.

Here are some of the findings from the study of the industry: Total product value of California's turfgrass sod, floriculture and nursery plant production totalled more than $1.4 billion in 1987, the latest figures available. Wages for the production of ornamental plants, flowers, seeds and bulbs topped $427 million, and an average of 28,834 people were employed in this segment of this industry the same year.

The use of ornamental plants in the landscape had an even larger economic impact. This component of environmental horticulture includes services such as retail sales, design, installation and maintenance activities. Their total is $5.3 billion. Gross receipts in 1987 from retail sales totalled more than $1.181 billion. landscape design brought in more than $262 million; installation and maintenance work grossed about $2 billion. Total wages for these businesses plus those for Cal Trans, state parks and recreation and city and county district parks topped $1.5 billion. These wages went to some 75,000 employees.

Humankind places many values on landscaping, from aesthetic pleasure and recreational uses to soil erosion and wind control. This nation's researchers, with the horticultural industry's support, are now taking a closer look at the role of horticulture in human well-being and social development. Expressed from a commercial perspective, the potential is for horticulture/gardening/people-plant interaction to be to human well-being in the 1990's what sports/physical fitness/health-exercise was in the 1980's.

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FORREST CRESS is a staff writer at the University of California, Cooperative Extension, Riverside.

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DEADHEADING A WAY OF LIFE

by Melba Davis

DEADHEADING IS THE CAREFUL removal of old flowers from the plant giving the plant the ability to grow more blooms. Good gardeners are now out in the yard plucking off the blossoms that are fading, or using clippers to take off more of the stem. Some gardeners are just pinching things back a little. Many take the blossoms and dry them to use for various potpourri or sachets. Whether you use the blossoms or not, deadheading is really a smart thing to do in order to have the best garden you can.

Flowers that are allowed to die on the stem manage to send a negative message to the plant that makes the plant give up on growth and go to seed for the next year.

With annuals such as the marigold, zinnias and cosmos, try to remove the flower and stem down to about the first leaf. If you happen to have plants that really got carried away in growing longer stems for the flowers than they should have, this is the time to trim them back enough to make the plant look good. The plant will appreciate that and reward you with a new crop of blossoms on uncluttered plants.

To deadhead some of your perennials such as the marguerites, gaillardias and coreopsis, you can get a little more severe in cutting them back. They should be cut back to a bud, branch or even removal of the entire shoot! On marguerites and other soft-stemmed plants that have a mass of flowers, you can even take a pair of hedge shears and give them a flat top cut across the top. It is quicker for sure!

Whether you drop the flowers into your potpourri or into the compost heap, they will give you more pleasure while helping you to maintain a garden that pleases you and the plants. A green, clean, water-wise California is possible. let's go for it.

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MELBA DAVIS is a garden news writer with the California Association of Nurserymen.

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HISTORICAL CAMELLIA AT HUNTINGTON

THERE IS A CAMELLIA at the Huntington Gardens which was blooming here long before any member of the present staff was born. Henry Huntington first discovered it when he purchased the property - known as the San Marino Ranch - back in 1903. Over the years the camellia has attained a stature of over twelve feet in height and nearly twice that in breadth, and from February through April its dainty shell-pink blossoms create a breathtaking display. It is appropriately named "Pink Perfection."

A stroll down the gravel paths of the Camellia Garden just west of the North Vista will reveal "Pink Perfection" in all its glory, looking, if anything, more beautiful today than in Mr. Huntington's time. Originally named "Usu-Otome" (meaning "Pale Maiden"), "Pink Perfection" is a cultivar of Camellia japonica which arrived in California from Japan in 1875. Still sold in retail nurseries, it continues to be one of the most popular of the many thousands of camellias in existence.

In the Huntington's North Vista and North Canyon areas there are now more than 1,700 cultivars of camellias and more than 2,000 individual plants. Acquisitions date back to 1908 when Huntington's superintendent, William Hertrich, purchased about two dozen camellia plants from a local nursery. Over the years, other additions were made a few at a time, including many new varieties developed by the Huntington's botanical staff.

The winter months are the perfect time to visit the Gardens and see the camellias at their best. You will find such varieties as the small, bright red "Freedom Bell;" the large, semi-double red "Grand Prix;" the rose-pink "Mandalay Queen" with its fluted petals; and the unusual "Tama-No-Ura," a small, single-bordered white camellia.

And be sure to pay a visit to the grande dame of them all, "Pink Perfection," whose location is marked with a bronze plaque commemorating 100 years of beautiful blooms.

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The Huntington is open to the public Tuesday through Sunday from 1 to 4:30 p.m. Advance reservations are required on Sundays. Admission is free. For information and Sunday reservations, telephone 818-405-2141 Tuesday through Sunday between 12:30 and 4:30 p.m.

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FLORASCOPE

TIME-LAPSE PHOTOGRAPHY done at the University of Washington in the '50's, shows that a change of soil texture causes water to stop. Water will saturate the top soil before beginning to drip through to the next layer. This is true even if sand or gravel sits below clay. So any change of texture, such as gravel in the bottom of pots reduces room for roots. Still we like to keep dirt from falling out of containers.

Instead of using pieces of shard or pebbles in the bottom of flower pots, you can stuff the drainage holes with a ball of nylon stocking. For very large pots, wrap some spaghnum moss inside the nylon balls (so you use less nylon). This will keep sow bugs out as will sheer nylon window curtain or window screening. It allows water to pass through, protects soil from sifting through when you water, never shifts or plugs up the drainage hole and lasts for years. In one case, after ten years, the nylon was still intact.

Squash a piece of nylon stocking into a ball slightly larger than the diameter of the hole. Using your thumb or a pencil, stuff it firmly in the hole. Carefully hold it in place with your fingers as you fill the pot with potting soil. Be sure it is tightly stuffed, then it should remain indefinitely.

For small plastic pots, cover the bottom of the pot with the nylon and extend it up the sides about one and one half inches, using several layers of nylon or the heavy part of the stocking. Place it carefully, being sure to cover all four holes. Pour soil into the center of the pot first, then out to the edges to hold the nylon in place.

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TO CLEAN UP AND REMOVE calcium, magnesium and salt scale from clay pots soak them in a solution of one part muriatic acid to four parts water. Brush if necessary and rinse thoroughly in clean water.

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Lovejoy, Ann
THE BORDER IN BLOOM;
A Northwest Garden Through the Seasons
Seattle, Sasquatch Books, 1990
260p, diagrams, color illustrations
9" x 6" paperback, $14.95

An experienced, award-winning garden writer, Ann Lovejoy lives in Washington State. This book is a collection of 54 essays about gardening year round, beginning in January/February and following the seasonal cycle. The author concentrates on borders, and she provides a wealth of information, made readily accessible by a comprehensive index. The five appendices give lists of nurseries, seed companies, and tool and supply sources, plus names of clubs and societies; and the section on magazines, books and garden writers is outstanding. A special feature consists of four fold-out color picture diagrams illustrating a border in the Northwest in the four seasons. This is followed by appropriate planting diagrams and plant lists. Ann Lovejoy writes thoughtfully and sensitively, and her book can be enjoyed for its literary quality as well as for its practical help. This title ought to be considered for purchase by gardening libraries everywhere.

* * *

Hessayon, D.G.
THE "EXPERT" SERIES
New York, Sterling, 1990
Each title 128p, all in color,
7 1/4 x 9 1/2, $8.95, hardbound.
1. The Houseplant Expert; 2. The Indoor Plant Spotter; 3. The Rose Expert; 4. The Flower Expert; 5. The Lawn Expert; 6. The Tree an Shrub Expert; 7. The Vegetable expert.

First published in Britain, and now available in the U.S., this series of paperbacks compares favorably with other softbound sets from American sources carried by many nurseries and bookstores. There are occasional Briticisms which need to be translated e.g. "market" means farmer's market, "swede" means rutabaga, and the jacaranda is here listed as a houseplant. The data on climate is not relevant in Southern California, but there is plenty of good gardening information, clearly laid out and well organized. In some cases the plant indexes are re-inforced with dictionaries. The texts are arranged in paragraphs rather than chapters, and there is frequent alphabetization. The lavish use of color adds extra interest. These titles would make good gifts for young people and for any novice gardener.

* * *

Gottlieb, Jane, illustrator
GARDEN TALES
New York, Viking, 1990
102p, color photos,
7 1/4 x 8 1/4, $12.95, hardcover.

Jane Gottlieb has collected five classic short stories, all with a basic theme of gardens and gardening, and illustrated them with her own color photographs. The writers are all literary giants, including such names as Eudora Welty, John Steinbeck and Katherine Mansfield. Not a book for the practical gardener, this is a feast of good writing suitably decorated. The format is an interesting concept, leading to speculation as to what could be done using poetry instead of prose and paintings instead of photographs.

* * *

Thomas, Graham Stuart
PLANTS FOR GROUND COVER
Portland, Sagapress, rev ed, 1990
283p, 32 color plates,
79 black and white photos,
9 x 6, $22.50

First published in 1970 and revised in 1977 and 1984, this time with the addition of a map showing plant hardiness zones in the U.S. Appendix I deals with weeds and weed control, and Appendix II, which is lists of plants for special conditions, has been given an addenda. The bibliography on page 26p lists only three titles published after 1970. There are 32 color plates showing 61 photographs, and 79 black and white photographs. These last achieve the author's stated purpose, which is "to convey the appearance of a mass of foliage rather than the individual leaf," but the inclusion of more close-up shots would have reinforced his point. There is a discussion of preparation, cultivation, planting and maintenance, but the bulk of the book is devoted to alphabetical tables listing various plants, as e.g. shrubs, conifers, ferns, etc. These tables are clearly organized and give the essential data on each plant in an easy-to-use style. Graham Stuart Thomas has had a distinguished career in horticulture in England, and he has many honors to his credit. His survey of ground-cover plants is both thorough and authoritative. For gardeners in dry climates, and for anyone seeking an alternative to the ever-thirsty lawn, this book will be of real assistance.

Swain, Bill
ROSES: Questions and Answers
New York, Sterling, 1990
$19.95

Bill Swain has had a long and varied career in horticulture in Britain. His book is a good reference source on rose culture in the British Isles. He is knowledgeable about choosing, cultivating and exhibiting. and he has included a helpful work calendar, though it needs to be adapted in order to be of use in other environments. There are 16 color plates showing 28 different roses.The author gives lists of nurseries, useful addresses and suppliers and there is also a bibliography, but all of these are for British gardeners. The strength of the book is the chapter entitled Questions and Answers. This covers many aspects of rose culture and should be of interest to all rosarians.

* * *

Stuart, David and Sutherland, James
PLANTS FROM THE PAST;
Old Flowers in New Gardens
New York, Penguin, 1990
255p, color photos, black and white illustrations, 9" x 6"
$16.95, paperbound.

The best review of this book would be a reprint of the introduction in its entirety; instead a concise description must suffice. The authors make it clear that this is not a how-to book, and it should be used with a good manual on gardening and a gardening dictionary. They have concentrated on flowers and/or the reproduction of gardens of different periods and styles. There are plant lists for each time segment, and some good advice on design, including some illustrations taken from old herbals. The bibliography is excellent and the list of recommended nurseries gives names in the United States as well as the Untied Kingdom. A special feature is three pages devoted to mini biographies of notable gardeners, botanists and horticulturists. For gardeners with an interest in antiques (the living kind) and in history.

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- SOIL TESTING
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Ferguson, J. Barry and Cowan, Tom
LIVING WITH FLOWERS
New York, Rizzoli, 1990
208p, 350 illustrsations (some color) 12" x 9", $40.00.

Here is an embarrassment of riches. The many color photographs are to be enjoyed for their beauty, although arrangers will recognize that these designs are expertly lighted and would be less breathtaking in more usual settings. The text, which is a thorough and literal coverage of the title, has a variety of original ideas and useful tips. The section on the care and conditioning of flowers is especially helpful. It includes some information on reviving flowers, and on packing for transportation. As well as providing examples of the use of color and texture in arranging, the book has a section called Tools of the Trade which covers mechanics and techniques in a way that will interest both experienced and beginning arrangers. There are three lists of recommendations. Of these, the excellent bibliography stresses the author's view that "in the world of books, flowers are always in full bloom." This author is clearly a flower-loving bookman as well as a bookish flower lover.

* * *

Fisk, Jim
CLEMATIS: The Queen of Climbers
New York, Sterling, 1990, $24.95

In temperate climates clematis flourishes in many varieties, but in San Diego's warmer, dryer environment this beautiful vine is less often seen. Jim Fisk is a fifty-year veteran grower, and his book is a mine of information. He begins with a chapter on the history of the clematis, and then he discusses planting, training, pruning, propagation and hybridizing. The many photographs serve to re-inforce his descriptions, and give an enlightening picture of the wide range of blooms available. Chapter 9 is an endearing account, almost entirely autobiographical, of the author's nursery in Suffolk, England, which he founded in 1946. It is now an internationally-known business, and its owner is a well-established exhibitor at the Chelsea Flower Show. Jim Fisk's stories of his early struggles make fascinating reading. This book is a British publication, and so the emphasis is on growing clematis in the British Isles; but chapter 12 discusses the activities of the International Clematis Society and so gives an indication of the interest in this beautiful plant in other countries. Hopefully, readers in Southern California will be encouraged to try their luck.

Rose, Peter Q.
IVIES
Poole, England, Blandford Press
Rev ed. 1990
180p, 71 color photos, 8 1/2" x 5 3/4"
paperback, $10.95.
Rose, Peter Q.
CLIMBERS AND WALL PLANTS
Poole, England, Blandford Press, 1990
168p, 48 color photos, 8 1/2" x 5 3/4"
paperback, $10.95.
Bailey, Steven
CARNATIONS
Poole, England, Blandford Press
Rev ed, 1990
216p, 50 color photos, 8 1/2" x 5 3/4",
paperback, $10.95.

The original editions of these books arrived in the SDFA office in 1980 and 1983 respectively, and they were subsequently reviewed in California Garden magazine, Jan/Feb, 1981 and May/June, 1983, by Russell P. MacFail. Part III, Descriptions of Cultivars, in Steven Bailey's book has been rewritten, but revisions in the other books are minimal. The original reviews, reproduced here, are still relevant.

* * *

CLIMBERS AND WALL PLANTS

Like several other books sent to SDFA library by this publisher, this one is handsomely done with a dramatic section of color photographs of climbing plants, and it is likewise severely practical in its instructions for choosing, placing, and growing climbers. Some 110 genera of this group are discussed, especially clematis, the roses, honeysuckle and wisteria, with only one notable exception, ivy, which is the subject of another book by the author. One commendable feature of the book is an American zoning map. In a foreword, Ray Lancaster laments that climbing plants have been too little appreciated. Perhaps this book will help remedy that situation. Russell P. MacFall

California Garden, May-June, 1983

* * *

IVIES

According to author Rose, this is the first comprehensive book about ivies in more than a century, and badly needed because of the confusion about species that has developed in that time. His treatment of the subject includes ivies for house, garden and landscaping, advice about cultivation, and a long section on species and varieties, some one hundred or more. Sixteen pages of illustrations illustrate many of them. The author is a national plant health inspector. Russell P. MacFall

California Garden, Jan-Feb, 1981

CARNATIONS

Steven Bailey has been growing carnations for (over) 50 years in England and has brought together in this revised edition the wisdom he has accumulated in those decades about perpetual-flowering carnations, border carnations and pinks. Highly practical advice on greenhouses, propagation, diseases, insect pests, hybridization, and exhibiting makes up the substance of the book, together with luscious color photographs of some 60 species. Russell MacFall

California Garden, March-April, 1983

* * *

LIST OF PUBLISHERS:

Penguin Books
375 Hudson Street
New York, NY 10014

* * *

Rizzoli International Publications
300 Park Avenue South
New York, NY 10010

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Sagapress/Timber Press
9999 SW Wilshire
Portland, OR 97225

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Sasquatch Books
1931 Second Avenue
Seattle, WA 98101

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Sterling Publishing Co.
387 Park Avenue South
New York NY 10016-8810

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Viking Penguin
40 West 23rd Street
New York, NY 10010

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NOW IS THE TIME...

A CULTURAL CALENDAR OF CARE FROM OUR AFFILIATES

Compiled by Penny Bunker

AFRICAN VIOLETS

Helen LaGamma

HAVE good ventilation about the plants - leave air space between the plants.

KEEP violets well groomed - have clean area.

SPRAY the leaves with warm water, cool water will chill the plant. **KEEP** pans of wet pebbles among the plants for added humidity; very important during hot weather.

KEEP plants out of direct sunlight; use cool light tubes.

* * *

BEGONIAS

Margaret Lee

TAKE cuttings to increase your plants.

FEED tuberous begonias in September as long as leaves remain green.

GIVE final feeding of the year in October to your regular begonias unless you have fed all year round with a balanced fertilizer.

START withholding water from the tuberous begonias in October, and, of course, do not feed them again.

* * *

BONSAI

Dr. Herbert Markowitz

KEEP plants moist, do not allow to dry out. On hot days, spray after the temperature has cooled in the evening.

KEEP turning bonsai so they receive equal sun on both sides.

PLACE plants under lath or shade cloth to protect from burning.

TRIM and shape deciduous trees. **TRANSPLANT** some trees with care; just transfer to a pot one size larger and add new plant material if necessary.

WAIT until spring for any major transplanting.

FEED with 1/4 strength fertilizer to those trees showing signs of being in their growth cycle (new growth or buds showing).

BROMELIADS

Mary Siemers

CONTINUE feeding throughout the warm weather months.

KEEP moist during any dry Santa Ana winds. Do not water if the rains fall.

POT UP pups now while weather is still warm.

CUT the pups that are at least 1/3 size of the mother plant.

GROOM plants by cutting dead blooms and discolored leaves.

REPOT to the next size larger if necessary.

CHECK for scale, snails and slugs.

* * *

CACTUS & SUCCULENTS

Joseph Betzler

WATCH the weather situation as changes can occur very fast in our areas. Protect from any hot days that may occur in October, be aware of any frost in certain areas and protect.

MAINTAIN a high moisture level, especially if dry hot winds occur, otherwise start hardening plants. **WATCH** plants and fertilize less as they go dormant. The winter growers need more fertilizer and water as they start to grow.

FEED with a low nitrogen fertilizer. **DIVIDE** overgrown plants and propagate new growth.

TRANSPLANT actively growing seedings and rooted cuttings now so they can become established before winter. **CLEAN** areas that plants are grown in.

CHECK plants carefully for pests and disease. Look for mealy bugs, mites, aphids, snails and slugs - treat appropriately.

* * *

CAMELLIAS

E.C. (Gene) Snooks

HAVE a regular watering schedule - during any Santa Ana days spraying of the foliage will be beneficial. Lack of water is common cause of bud drop.

FERTILIZE with a 2-10-10 or similar fertilizer to have the best bloom development. If using a liquid type, use at least once a month during winter months.

START or continue to disbud for better blooms. Leave one bud per branch for quality show blooms. Leave some down the stem for later bloom.

START applying Gibberellic acid for earlier blooms. Buds should open in about two months.

APPLY iron at this time to develop maximum color in blooms.

SPRAY for bud mites or spider mites with kelthane or similar miticide.

DAHLIAS

Abe Janzen

MAINTAIN a regular watering program until the first of October, then cut down gradually.
CLEAN up old leaves and stalks, preparing for winter cleanup.
SPRAY to prevent mildew and spider mite.
FEED potash to promote root growth. It also helps them to keep better during the winter.

* * *

EPIPHYLLUMS

PREVENT soil from completely drying out. An occasional misting or spraying of foliage can be beneficial.
PROTECT plants from exposure to direct sunlight.
PROTECT growth from any wind damage. **BAIT** for snails and slugs. A few granules of Sluggetta at the base of the plant is very effective, and leaves little or no residue. **PRACTICE** preventative maintenance regarding insect control. Use insecticides such as Malathion or Orthene, only if absolutely necessary. Read and follow instructions on labels.
GIVE plants a final feeding for fall - using a balanced fertilizer before they become semi-dormant.

* * *

FERNS

Ray Sodomka

MAINTAIN a watering program, keeping humidity up by keeping the surrounding areas damp. Beware of hot dry winds.
PLANT spore of all varieties. **FERTILIZE** plants regularly with high-nitrogen formula.
TRIM off dead fronds.
CHECK for aphids, mealybugs and scale - may use Malathion.
CONTROL snails, pillbugs, and slugs with metaldehyde granules.
REPOT house ferns to next size pot if overcrowded.

* * *

FUCHSIAS

MAINTAIN humidity by keeping area sprayed. Mist plants during Santa Ana days; but do not overwater.
PICK off faded blossoms and seed pods.
PROTECT plants from any hot dry winds.
CONTINUE fertilizing for winter bloom.
TAKE cuttings from good healthy growth - using only the tender tips. October is a better month to propagate new plants.
KEEP cuttings in a cool place for 4-5 days; keep moist but not wet or soggy.
SPRAY for insect control - being sure to wet the underside of leaves; the hiding place for egg laying.

GERANIUMS

Carol Roller

WATER thoroughly when plants become somewhat dry. Allow excess water to drain away. Keep foliage as dry as possible.
CONTINUE feeding with a balanced fertilizer dissolved in water, using less than the recommended strength. Apply as often as necessary to avoid nutritional deficiencies. Long term pellets may be used instead.
CONTINUE a pest control and disease prevention program using products according to the manufacturers' directions.
BEGIN pruning. On regals, scented and similar types, at least one green leaf should be left on each stem cut back.
MAKE cuttings from the prunings. Shelter cuttings from extreme weather.
KEEP all the plants tidy by removing faded flowers and discolored leaves. **CONTINUE** to rotate plants on a regular basis in order to keep them well-shaped.

* * *

IRIS

PLANT beardless iris. Spurias, Siberians, Louisianas and Japanese varieties. Keep moist until well established. Louisianas and Japanese are grown in pots or pools, or under swampy conditions.
STILL divide and plant clumps of bearded iris.
CLEAN up beds and discard old fans and debris.
FEED established tall-bearded that are not being divided.
CONTROL any snails and slugs.
PLANT Dutch bulbs in October for spring bloom

* * *

ORCHIDS

Charles Fouquette

BEGIN low nitrogen, high phosphate, high potash feeding for cymbidiums. **FEED** phalaenopsis with a 3-1-2 solution.
KEEP phals moist and out of direct or intense sunlight.
WATCH for slugs and snails on stalks and sheaths of orchids that should be in bud or flower.
CHECK for scale or other insects that like it drier, and spray accordingly.
CHECK heater controls, pilot lights, flues and vents, for spider webs, or buildup in flues, or smoke-stack. Check before needed.
CLEAN, de-scale and replace fiber pads, when you finish using a swamp cooler or wetpad for the year. Oil motor and pump. Remove water from reservoir, and patch any leaks using roof-repair bittumastic non-setting type.

ROSES

Frank Hastings

FEED only with a balanced fertilizer. Water the day before fertilizing. Water in dry fertilizer.

FEED three tablespoons of liquid fish emulsion per gallon of water per bush two weeks after feeding dry fertilizer.

FEED liquid iron the first week of September.

WASH off spider mites with a jet spray of water under leaves weekly. **SPRAY** weekly with a mixture of Orthene and a fungicide, as per instructions. Be sure to water the day before.

DISBUD for one bloom to a stem on Hybrid teas and Grandifloras.

WATER at least twice a week unless 3/4 inch of rain falls in one week.

* * *

VEGETABLES

DO the first plantings of cool weather vegetables for winter by setting started plants of cabbage and its relatives, and celery.

PLANT seeds of mustard, peas, lettuce and root vegetables.

WATER deeply as needed- not just a light sprinkling.

HARVEST any vegetables in their prime condition and encourage the bushes and vines to bear longer.

FERTILIZE as needed, so plants grow vigorously, and bear larger and more succulent edible parts.

* * *

GREEN THUMB

DIVIDE the daylilies, agapanthus, Shasta daisies and belladonna lilies after blooming.

FEED well established shrubs with a balanced fertilizer; water thoroughly.

DUST and stake chrysanthemums, but do not pinch tips any more; disbud for larger blooms.

PREPARE bulb beds; add humus. Do not plant at this time, get early bulbs in nursery and place in refrigerator for a few weeks before planting. **MULCH** acid-loving plants, using peat moss or ground bark.

PLANT spring flowers such as calendulas, cinerarias, snap-dragons and pansies.

PLANT watsonias, scillas, jonquils in October, and put in some daffodils later in the month.

PRUNE wisteria back to prepare vines for their spring blooms.

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Alfred C. Hottes

MAHONIAH, *named for Bernard McMahon, American horticulturist. Related to Barberries, not Hollies. Highly ornamental, evergreen, with shiny, spiny-toothed leaves and yellow flowers in dense terminal clusters, followed by bluish berries. Needs some shade, most any soil.*

MAHONIA AQUILIFOLIA, *Oregongrape. Widely cultivated. leaves three-to-nine-parted, leathery, bronzy when young, bright red in cold weather. Fruits frosty purple-black.* ***M. pinnata,*** *Cluster Hollygrape. A California native; grows well in dry ground here. Leaflets five-to-nine-parted, ovate, wavy-margined, with heart-shaped base.*

M. BEALEI, *introduced from China as* ***M. japonica,*** *which is seldom seen. Leaves of* ***M. bealei,*** *spiral around the branch. 9 to 15 leaflets, sometimes 5 inches long, tight to stalk, ovate with very stiff sharp points. Flower racemes 3 to 4 inches long.* ***M. nevini,*** *has five leaflets, oblong, undulated, grayish, with short petioles and red berries.* ***M. fortunei,*** *from China, has 5 to 8 leaflets, narrow and wedge-shaped. Flowers in 6 inch racemes.*

-=-

BARBARA'S BASIC BOTANY #3

by Barbara S. Jones

THE ROOT IS THE PART of a plant that grows into the soil and anchors it. The root also takes up water and nutrients from the soil and sometimes stores food. Usually any part of the plant that is in the soil is called a root, but botanically these parts can be a stem or even leaves.

There are two main types of roots, tap and fibrous. A good example of a tap root is a carrot. Smaller roots branch out from a tap root. Fibrous roots look like a mass of thick branching threads and are attached directly to the base of a stem. If you pull up a plant, you will see tiny roots near the tips. These are ROOT HAIRS which are the first stage of the process of absorption of water and minerals by the plant from the soil. Root hairs are tiny extensions, 1/8 to 1/4 inch in length, of the EPIDERMIS (cover layer). They are found among young roots behind the ROOT CAP (tip). In the root cap, new cells are being continuously formed that push the root out into the soil. As the root grows, new root hairs form and the old ones die. Root hairs are delicate and die quickly if exposed to dry air or sunlight.

Minerals can only be absorbed if they are in solution. Minerals are taken in at different rates and the plant cannot select the ones it needs or the ones which will eventually kill it. The process of absorption is very complex, but it does happen. Often you will hear that certain minerals are LOCKED-UP in the soil and cannot be used by the plants. Usually, to unlock these minerals one must apply some other minerals which, by a chemical reaction, turns the locked-up mineral into a form that can go into solution and be absorbed by the plant.

Not all root-vegetables are botanical roots. The food term ROOT VEGETABLE usually applies to any edible part of a plant which grows underground.

There are STILT ROOTS which are smaller roots which grow out near the bottom of a tree or shrub trunk. These are usually seen on plants that grow in damp soils or where the soil is very loose. Another type of root is an AERIAL ROOT which grows above the ground. These roots often hang down and absorb water from moist air.

Water is one of the most important parts of a plant and makes up three-fourths or more of a plant's weight. Leaves can absorb some water, but the roots are the primary organ involved in water absorption.

-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

Barbara Jones majored in Botany at SDSU. She was a seventh and eighth Grade Science teacher in San Diego.

Broccoli

FRESHLY PICKED BROCCOLI is delicious raw or cooked and exceptionally high in vitamins C and A and fiber. Recent medical research has shown that eatings lots of brassica family plants such as broccoli may actually help prevent cancer. This is great news for home gardeners, because broccoli is not only fine eating but also easy to grow and has a long harvest season. Cook broccoli quickly for best color and flavor. Regular broccoli also freezes well, although in mild-winter areas you can plant both spring and summer and overwintering varieties and you'll be harvesting it almost year 'round.

* * *

HINTS FOR GROWING BROCCOLI: Broccoli likes to be firmly planted in a rich well-drained soil with plenty of organic matter worked into it. Be sure to space plants at least 18 inches apart. Keep well weeded and watered to ensure the rapid steady growth broccoli needs. To get big heads, feed frequently with a high-nitrogen fertilizer source. harvest the main head when its buds are compact and tight. Cut the head low and at an angle on the center stalk to encourage side shoots. Nontoxic B.T. (Bacilus thuringiensis) is a thoroughly safe way to control all caterpillar pests.

-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

Drawing and article reprinted courtesy of Shepherd's Garden Seeds, Felton, CA 95018.

Oct. 20-21 **LAKE HODGES NATIVE PLANT CLUB** Annual Plant Sale
Ralph's Shopping Center, Pomerado-Bernardo Heights Parkway, Rancho Bernardo. Proceeds to benefit native plant garden at Wild Animal Park. Sat.: 9-4:00 p.m.; Sun.: 9-12:00 p.m. Free. Call 487-6614.

Oct. 20-21 **QUAIL BOTANICAL GARDENS** "A Day in the Gardens"
Tours and Plant Sale. 230 Quail Gardens Drive, Encinitas.
Sat.-Sun.: 10-4:00 p.m. Parking $1. Call 436-3036.

Oct. 25-26 **ANNUAL XERISCAPE CONFERENCE**
Sponsored jointly by the Cuyamaca College Botanical Society and the San Diego County Water Authority. San Diego Convention Center, San Diego. For further information, call: 619/443-1756.

Oct. 20-21 **SAN DIEGO COUNTY ORCHID SOCIETY** Fall "Mini" Show
Casa del Prado, Majorca Room, Balboa Park Sat.: 12-5:00 p.m. Sun.: 10-4:30 p.m. Free.

Oct. 27-28 **ICHIYO SCHOOL OF IKEBANA, SAN DIEGO CHAPTER,** Show
8th Anniversary Fall Exhibition, Casa del Prado, Majorca Room, Balboa Park
Sat.-Sun.: 11-4:00 p.m. Free.

Oct. 27-28 **LOS ANGELES COUNTY STATE-COUNTY ARBORETUM** Rare and Unusual Plant Sale.
301 North Baldwin Avenue, Arcadia. Sat.-Sun.: 9-4:30 p.m. Garden admission $3.
Call 818/446-8251.

Oct. 31 * **SAN DIEGO FLORAL ASSOCIATION** Basket Making Class
Details same as for Sept. 26 class.

Oct. 31 to Nov. 8 **SANTA BARBARA BOTANIC GARDEN** Islands Tour
1212 Mission Canyon Road, Santa Barbara. Explore gardens-island flora on Oahu, Hawaii-Kauai. Look at environmental efforts-horticultural trends. Two escorts. Call 8055/682-4726 (ext. 108).

Nov. 6 * **SAN DIEGO FLORAL ASSOCIATION** Flower Arranging Class
Adrienne Green, instructor. Advanced floral designs. To register, send $15 check to San Diego Floral Association, Casa del Prado, Balboa Park, San Diego 92101, Attention: Marie Walsh. 9:30-2:30 p.m. For information and room location, call 232-5762.

Nov. 9 **PALOMAR DISTRICTS, CALIFORNIA GARDEN CLUBS, INC.** Design Show
Kona Kai Beach-Tennis Resort, 1551 Shelter Island Drive. Fund-raising floral demonstration-luncheon. "Seasonal Flowers-Their Language", designs by Robert L. Gordon, A.F.I.D., of San Luis Obispo. 11:00 a.m. $20. Reservations deadline: Nov. 5. Call 748-6324.

Nov. 18 **SUMI-E PAINTING-IKEBANA** 15th Annual Show
Casa del Prado, Majorca Room, Balboa Park 11-4:00 p.m. Free.

Every Sat. **OFFSHOOT TOURS** One-hour Plant Walks in Balboa Park
Meet in front of Botanical Lath house. Canceled for rain or fewer than 4 attendees.
1st Sat.: Heart of the Park Tour; 2nd Sat.: Palm Walk; 3rd Sat.: Tree Walk; 4th Sat.: Desert Walk; 5th Sat.: Sample of all 4 tours. 10:00 a.m. Free. No reservations.

Deadline for submission to Horticultural Calendar for Nov./Dec. issue is Sept. 15. SAN DIEGO FLORAL ASSOCIATION is not responsible for changes in information which has been submitted by the organizations.

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4995 Fanuel Street
San Diego CA 92109-2134
619/488-0830
1st Mon - 11:30 am
Rondavel Room San Diego Zoo

MIRACOSTA HORTICULTURE CLUB
Pres: Helen Odom
1253 Nordahl Road
Escondido CA 92026
619/743-1921
3rd Sat - 2:00 pm
Student Center Building
Miracosta Community College

PROFESSIONAL WOMEN'S HORTICULTURAL AND LANDSCAPE ASSN. (PWHLA)
Pres: Helen Stone
4594 38th Street
San Diego CA 92116-4638
619/753-1545
4th Wed - Jan-Mar-May-Sep
1st Wed - Nov

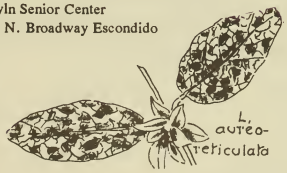
SAN DIEGO ASSOCIATION OF PROFESSIONAL HORTICULTURISTS
Pres: Stan Rys
1233 Hayes Avenue
San Diego CA 92103-2310
619/298-9118
4th Mon - 7:30 pm
Casa del Prado Rm 104
Balboa Park

SAN DIEGO BOTANICAL GARDEN FOUNDATION
Pres: Kathie J. Van Arum
1825 "I" Avenue
National City CA 92050-5836
619/477-5258

SOUTHWESTERN JUDGES COUNCIL
Chr: Bettie Morris
1148 Canary Court
San Marcos CA 92069-4717
619/744-3435
1st Wed - 10:00 am
Casa del Prado Balboa Park

GARDEN CLUBS

BERNARDO GARDENER'S CLUB
Pres: Helen H. Andrews
12764 Via Moura
San Diego CA 92128-1245
619/485-9272
3rd Thu - 1:30 pm
Josyln Senior Center
724 N. Broadway Escondido



BONITA VALLEY GARDEN CLUB
Pres: Carol Robertson
3391 Cypress Street
National City CA 92050-7751
619/475-8487
2nd Wed - 9:30 am Coffee
10:00 am Meeting
Sep thru Jun
Rohr Park Manor Bonita

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Pres: Susanne Scribner
861 Coronado Avenue
Coronado CA 92118-2434
619/435-8088

CHULA VISTA GARDEN CLUB
Pres: Mrs. Robert Anderes
1569 Oleander Avenue
Chula Vista CA 92011-5645
619/421-9631
3rd Wed - 1:00 pm
Rohr Park Manor Bonita

CONVAIR GARDEN CLUB
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6197 Arno Drive
San Diego CA 92120-4624
619/582-7098
1st Wed - 7:30 pm
Casa del Prado Balboa Park

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P. O. Box 118
Coronado CA 92118-0118
619/435-1723
Twice Annually
By Call of President

CROWN GARDEN CLUB
Pres: Mrs. David Sigsworth
861 Balboa
Coronado CA 92118-2424
619/435-5028
4th Thu - 9:00 am
Coronado Library Coronado

DOS VALLES GARDEN CLUB
Pres: Mrs. Don Kratzer
P. O. Box 1020
Valley Center CA 92082-7701
619/749-0337
2nd Tue - 1:00 pm
Valley Center Community
Hall Valley Center

ESCONDIDO GARDEN CLUB
Pres: Shirley Warner
1530 East El Norte Parkway, Sp10
Escondido CA 92027-1333
619/747-5324
3rd Fri - 1:00 pm
Joslyn Senior Center
724 N. Broadway Escondido

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Fallbrook CA 92028-9304
619/728-7479

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7450 Via Capri
La Jolla CA 92037-2848
619/459-0496
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8429 Midland Street
La Mesa CA 92042-7730
619/463-1273
2nd Mon - 9:30 am
4975 Memorial Drive La Mesa

LA JOLLA GARDEN CLUB
Pres: Mrs. Robert H. Van Kirk
7821 Boulevard Place
La Jolla CA 92037-3931
619/459-2825
3rd Tue - 1:30 pm Sep-Jun
La Jolla Lutheran Church
7111 La Jolla Boulevard La Jolla

LAKESIDE GARDEN CLUB
Pres: Donna Swink
11351 Eucalyptus Hills Drive
Lakeside CA 92040-1208
619/443-4176
3rd Mon - 7:30 pm
Lakeside Recreation Center
12219 Roberts Way Lakeside

LA MESA GARDEN CLUB
Pres: Mrs. Samuel D. James
5725 Urban Drive
La Mesa CA 92042-3922
619/465-5617
3rd Thu - 11:00 am
Except Jul Aug Nov
La Mesa Woman's Club
5220 Wilson Avenue La Mesa

LAS JARDINERAS
Pres: Mrs. Donald Giddings
2234 Caminito Preciosa Sur
La Jolla CA 92037-3337
619/270-1847
3rd Mon - 10:30 am
Home of Members

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Pres: Mrs. Wayne F. Dyer
13171 St. Andrews Drive #154L
Seal Beach CA 90740-3446
213/596-4161

ORGANIC GARDEN CLUB SAN DIEGO
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10836 Calle Verde Drive #153
La Mesa CA 92041-8308
619/660-9756
3rd Fri - 7:30 pm
Jan-Mar-May-Jul-Sep-Nov
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Pres: Michiko Munda
1544 Oliver Avenue
San Diego CA 92109-5321
619/272-9727
2nd Mon - 1:00 pm
Sep thru Jun
Recreation Center
Pacific Beach

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875 Albion Street
San Diego CA 92106-2933
619/222-2765
2nd Wed - 10:00 am
Sep-Jun 3598 Talbot
Westminister Presby Church

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619/566-5727

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Poway CA 92064
619/748-1978
2nd Wed - 9:00 am
Lake Poway Pavilion

RANCHO SANTA FE GARDEN CLUB
Pres: Mrs. Phyllis Aylmer
Hort Chrm: Vera Sanjana
P. O. Box 1257
Rancho Santa Fe CA 92067-1646
2nd Tue - 7:30 pm
Rancho Santa Fe Garden Club
Avenida de Acacias

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Pres: Joan Bales Mitchell
7575 Conestoga Way
San Diego CA 92120-1316
619/583-6826
4th Tue - 9:30 am
Home of Members

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Pres: Mrs. Hans Kaspar
1905 Hummock
Encinitas CA 92024-1908
619/753-4087
1st Wed 9:30 am - Refreshments
10:00 am Meeting
Quail Botanical Gardens

THE VILLAGE GARDEN CLUB OF LA JOLLA
Pres: Mrs. Harley Cope
8686 Cliffridge Avenue
La Jolla CA 92037-2113
619/546-9047
4th Thu - 1:00 pm
Sep thru May
United Methodist Church

THE VISTA GARDEN CLUB
Pres: Mrs. James McConnell
1268 Waxwing Drive
Vista CA 92083-3045
1st Fri - 12:00 pm
Vista Senior Service Center
222 Jefferson St. Vista

IKEBANA SCHOOLS

ICHIYO SCHOOL OF IKEBANA SAN DIEGO CHAPER
Pres: Haruko Crawford
10411 San Carlos Drive
Spring Valley CA 92078-1034
619/660-2046

IKEBANA INTERNATIONAL CHAPTER 119
Pres: Barbara E. Church
5845 Friars Road #1113
San Diego CA 92110-6004
619/298-1535
4th Wed - 10:00 am
Sep thru Jun
Casa del Prado Balboa Park

IKENOBO CHAPTER OF SAN DIEGO
Pres: Mrs. Charles Oehler
2822 Walker Drive
San Diego CA 92123-3056
619/278-5689

OHARA SCHOOL OF IKEBANA LA JOLLA CHAPTER
Pres: Mrs. Robert Fox
922 Skylark Drive
La Jolla CA 92037
619/456-0559
2nd Tues - 10:00 am
Forum Hall University Town
Center La Jolla

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Pres: Mrs. Walter Bourland
2936 Havasupai Avenue
San Diego CA 92117-1641
619/276-4667

SOGETSU SCHOOL OF IKEBANA
Pres: Mrs. Leroy Lahey
2829 Flax Drive
San Diego CA 92154-2160
619/429-6198

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AFRICAN VIOLETS

SAN DIEGO DAYTIME AFRICAN VIOLET SOCIETY
Pres: Betty Roberson
3612 Laredo Drive
Carlsbad CA 92008-2172
619/729-6772
2nd Mon - 1:00 pm
Christ United Methodist
Church San Diego

BALBOA PARK AFRICAN VIOLET SOCIETY
Pres: Melba Batchelor
4th Mon - 6:30 pm Dessert
7:00 pm Meeting
Casa del Prado Balboa Park

HEARTLAND AFRICAN VIOLET SOCIETY
Pres: Mrs. Dixie Puckett
697 Ellen Lane
El Cajon CA 92019-1933
619/588-0509
3rd Tue - 7:00 pm
Wells Park Center
1153 East Madison El Cajon

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INTERNATIONAL AROID SOCIETY
Pres: Bruce McManus
11691 SW 93rd Street
Miami FL 33176-1009
305/271-3767

BAMBOO

AMERICAN BAMBOO SOCIETY
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Box 640
Springville CA 93265-0640
209/481-9869

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ALFRED D. ROBINSON BRANCH AMERICAN BEGONIA SOCIETY
Pres: Mary Zemcik
4157 Catalina Place
San Diego CA 92107-2611
619/223-6439
2nd Tue - 10:30 am
Home of Members

SAN MIGUEL BRANCH AMERICAN BEGONIA SOCIETY
Pres: Toni Baker
6475 50th Streeet
San Diego CA 92120-1323
619/582-7516
Last Sat - 10:30 am
Home of Members

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SAN DIEGO BONSAI CLUB, INC.
Pres: Everett Jones
P. O. Box 40037
San Diego CA 92104-0970
619/421-3721
2nd Sun - 11:00 Workshop
1:00 pm Meeting
Casa del Prado Balboa Park

BROMELIAD

BROMELIAD STUDY GROUP OF BALBOA PARK
Pres: Mary Siemers
4614 Constance Drive
San Diego CA 92115-3108
619/284-2813
2nd Tue - 7:30 pm
Casa del Prado Balboa Park Rm 104

SAN DIEGO BROMELIAD SOCIETY
Pres: David Waller
10272 Black Mountain Rd. #160
San Diego CA 92126-3831
619/578-7041
1st Thu - 7:45 pm
Byzantine Catholic Church
2235 Galahad Road Serra Mesa

CAMELLIA
SAN DIEGO CAMELLIA SOCIETY
Pres: Bill Kalal
560 H Avenue
Coronado CA 92118-1624
619/299-5418
3rd Wed - 7:30 pm
Casa del Prado Balboa Park

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PALOMAR CACTUS AND SUCCULENT SOCIETY
Pres: Gene Eisenberg
P. O. Box 840
Escondido CA 92025
619/487-1051
4th Sat - 12:45 pm
Joslyn Senior Center
724 N. Broadway Escondido

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Pres: Chuck Adams
7305 Rock Canyon Drive
San Diego CA 92126-1061
619/530-2551
2nd Sat - 1:30pm
Casa del Prado Balboa Park

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Mem Chmn: Michael Martinolich
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New Hyde Park NY 11040-2446
516/742-3898

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Pres: Gerald Lohmann
6616 Rockglen Avenue
San Diego CA 92111-4108
619/279-5135
4th Tue - 7:30 pm
Except Jul & Dec
Casa del Prado Balboa Park

EPIPHYLLUM
SAN DIEGO EPIPHYLLUM SOCIETY
Pres: Sean Minogue
808 Ethel Place
National City CA 92050-4109
619/475-4478
2nd Wed - 7:30 pm
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EXOTIC
EXOTIC PLANT SOCIETY
Pres: George Plaisted
6356 Delbarton
San Diego CA 92120-2618
619/583-9551
4th Tue - 7:00 pm
Wells Recreation Center
1153 E. Madison El Cajon

FERN
SAN DIEGO FERN SOCIETY
Pres: George Plaisted
6356 Delbarton Street
San Diego CA 92120-2618
619/583-9551
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San Diego CA 92110
619/276-7896

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Pres: Robin Whitecotton
620 Melba #11
Encinitas CA 92024
619/942-8018
2nd Thu - 7:00 pm
Palmquist Elementary School
1999 California St. Oceanside

SAN DIEGO FUCHSIA AND SHADE PLANT SOCIETY
Pres: Bill Simpson
58 "I" Street
Chula Vista CA 92010-4924
619/422-7055
2nd Mon - 7:30 pm
Casa del Prado Balboa Park

SUN HARBOR BRANCH NATIONAL FUCHSIA SOCIETY
Pres: Robert Matlock
1333 New Chatel Drive
San Diego CA 92154-2937
619/423-0213
4th Wed - 7:00 pm.
Casa del Prado Balboa Park

GERANIUM
SAN DIEGO GERANIUM SOCIETY
Pres: Barbara Jolly
1412 Tenth Street
Imperial Beach CA 92032-3433
619/424-5659
2nd Tue - 7:30 pm
Casa del Prado Balboa Park

GESNERIAD
SAN DIEGO GESNERIAD SOCIETY
Corresponding Secretary:
Lois Donahue
3251 Innuit Avenue
San Diego CA 92117-3521
619/273-9677
3rd Wed - 7:30 pm
Feb Apr Jun Aug Oct Dec
St. David's Parish Hall
5050 Milton Street

HEMEROCALLIS
SOUTHWEST HEMEROCALLIS SOCIETY
Pres: Paul Strauss
7887 Revelle Drive
La Jolla CA 92037-3539
619/453-1998
1st Sat - 10:00 am
Feb-Apr-Jun-Sep-Nov
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Encinitas

IRIS
SAN DIEGO/IMPERIAL COUNTIES IRIS SOCIETY
Pres: William Barr
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San Diego CA 92128-3527
619/451-6333

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Valinda CA 91744-1323
Local Contact:
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619/459-1235

NATIVE PLANTS
CALIFORNIA NATIVE PLANT SOCIETY SAN DIEGO CHAPTER
Pres: James Dice
6066 Portobelo Court
San Diego CA 92124-1114
619/278-0326
3rd Tue - 7:30 pm
Casa del Prado Balboa Park

LAKE HODGES NATIVE PLANT CLUB
Pres: Dorris Baur
16516 Gabarda Road
San Diego CA 92128-3021
619/487-6614
3rd Mon - 3:00 pm
16003 Turtleback Road
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Vista CA 92084-1830
619/941-0382
3rd Thu - 7:30 pm
Oct thru Jun Quail Botanical Gardens Encinitas

PALOMAR ORCHID SOCIETY
Pres: Neta Jaynes
802 McDonald Road
Fallbrook CA 92028-3540
619/728-8974
2nd Fri - 7:30 pm
Vista Senior Center
222 Jefferson St. Vista

SAN DIEGO COUNTY ORCHID SOCIETY
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4477 Ampudia Street
San Diego CA 92103-4531
619/296-6437
1st Tue - 7:30 pm
Casa del Prado Balboa Park

ROSE

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Pres: Steve Marvin
P. O. Box 133
Carlsbad CA 92008-0030
619/433-2454
3rd Tue - 7:00 pm
Calavera Hills Community Center Carlsbad

EAST COUNTY ROSE SOCIETY
Pres: Sally Long
1663 Fuerte Ranch Road
El Cajon CA 92019-3730
1st Sun - 2:00 pm
Gardens of Members

SAN DIEGO ROSE SOCIETY
Pres: Dallas Runion
1627 Regulus Street
San Diego CA 92111-7129
619/279-6134
3rd Mon - 7:30 pm
Oct thru Jun
Casa del Prado Balboa Park

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THE WATER LILY SOCIETY
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Stanley Miller of East El Cajon planted this coast live oak from a five gallon container in 1937.
Photo by: Betty Newton

SAN DIEGO FLORAL ASSOCIATION, INC.

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CASA DEL PRADO ROOM 105 SAN DIEGO CA 92101-1619

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Balboa Park San Diego

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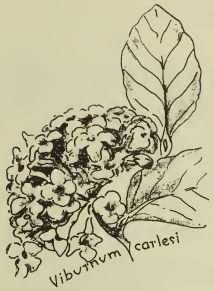

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Casa del Prado, Balboa Park
San Diego, CA 92101-1619, USA

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